

MULTIeco



Control Unit Operating instructions



Purpose and application

The MULTIeco control unit controls the lighting at the workplace and in offices according to the level of daylight and the pre-sence of persons to increase comfort and save energy.

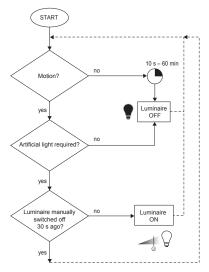
The control unit can be installed in luminaires (e.g. floor standing luminaires) or in suspended ceilings.

Function

Sensors measure the brightness in the section to be controlled and switch on the connected luminaires as soon as the level of daylight is less than an adjustable brightness switching

The sensors also detect the presence of people.

When people are no longer present, the connected luminaires switch off after an adjustable delay period.



Daylight-dependent switching and presence detection can be activated and deactivated using various operating modes.

Design

The control unit is made up of the following components:

- · Adjusting screw "time" (A): switch-off delay time
- Sensor connection (B)
- DIP switch (C)
- Adjusting screw "lux" (D): brightness switching threshold
- Button connection (E)
- Load contact (F)
- Power supply connection (G)

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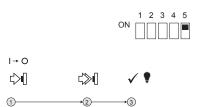
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Operation

Symbols Pushbutton on the lumi-Luminaire on 0 naire Switch on Luminaire off $O \rightarrow I$ Switch off Luminaire flashes 1 → O Daylight-dependent switching Short press (< 0.5 s)Long press (> 0.5 s) Confirmation of the setting Presence detection (detection of small ₿ Double-click movements)



Calibrating the brightness switching threshold

In order to control the luminaires according to the level of daylight, the brightness switching threshold must first be calibrated. The brightness value measured during the calibration is stored as a switch-on and switch-off threshold.

Manual calibration

Tip: Do not carry out calibration in complete darkness, but at approx. 50% level of daylight (morning or evening).

If necessary, set DIP switch 5 to ON.

- ① Switch off if necessary.
- ② Double-click. Luminaires switch on for 3 minutes, LED on the sensor flashes quickly.
 - Note: Double-click is locked if necessary, see "Locking and releasing double-click".
- ③ Acknowledgement: Luminaires switch off, LED on the sensor lights for 3 seconds.



The brightness switching threshold is automatically recalibrated after each switch-on or switch-off of the luminaire if the luminaires were switched on for at least 3 minutes.



Changing the brightness switching threshold

Turn the adjusting screw "lux" (D) to the required setting.

Right end stop (+ Max) (default setting): The luminaires only switch on (off) when the level of daylight falls below (exceeds) the brightness of the artificial light.

To left (- min): Reduces the brightness value of the switch-on and switch-off threshold.

The luminaires already switch on at a lower daylight level and switch off again correspondingly earlier.

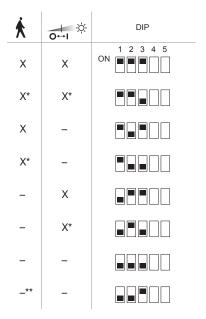
Adjusting the operating mode

The following functions are switched on and off using DIP switches 1, 2 and 3, see Table:



The device is delivered with both functions switched on.

- Does not switch on via sensor. Manual switch-on required.
- ** Switch-off not possible using pushbutton. Automatic switch-off after expiry of the switch-off delay time (independent of any movement).



Manually switching luminaire on and off

Via short press.



Note: When the presence detection is activated, each time a movement is detected, the countdown of the time restarts.

Turn the adjusting screw "time" (A) to the required setting:

Adjusting the switch-off delay time

- To the left: shorter (min. 10 s)
- To the right: longer (max. 60 min)



Activating/deactivating switch-off prewarning

Shortly before expiry of the switch-off delay time, the luminaires give a switch-off prewarning by briefly flashing.

DIP switch 4 = OFF:

Switch-off prewarning is activated.

DIP switch 4 = ON:

Switch-off prewarning is deactivated.



Deactivating presence detection via pushbutton

When presence detection is activated, the green LED on the sensor lights up briefly each time motion is detected.

Deactivating presence detection:

- ① Switch on if necessary.
- ② Double-click.

Note: Double-click is locked if necessary, see "Locking and releasing double-click".

③ Confirmation: Luminaire switches off. Green LED on the sensor lights continuously.

The presence detection is activated again the next time the luminaire is switched on by pushbutton if presence detection is switched on through selection of the corresponding operating mode.



Locking and releasing the double-click

Lock the double-click

- ① Switch on if necessary.
- ② Press the pushbutton for 15 seconds.
- ③ Confirmation: Luminaire flashes.



Double-click released

- ① Switch off if necessary.
- ② Press the pushbutton for 15 seconds.
- ③ Confirmation: Luminaire flashes.

Behaviour after a power failure

After a power failure, the luminaire remains switched off. Depending on the selected operating mode, the luminaire is then switched on according to the level of daylight, after presence detection or manually by pushbutton.

Operation (cont.)

Troubleshooting

If you cannot remedy the fault, please contact the Customer Service department of the luminaire manufacturer

Luminaire does not function

No mains voltage available.

→ Check whether the green LED is lit. Use a voltage tester to test if mains voltage is present.

Illuminant is faulty.

→ Replace illuminant.

The luminaire was switched off via the pushbutton.

→ Switch on luminaire.

The sensor is exposed to excessive amounts of ambient light. ightarrow Cover the sensor and observe the behaviour of the luminaire.

Double-click was locked.

→ Double-click re-released.

"Automatic calibration" setting (DIP switch 5 = OFF) was

→ Set DIP switch 5 to ON.

The luminaire does not switch off when there is too much daylight

Calibration of the luminaire has not yet been carried out or failed.

 $\ensuremath{\Rightarrow}$ Carry out calibration again. If necessary, reduce the brightness value of the switching threshold using the adjusting screw

Luminaire was switched on via the pushbutton. At the time of switching on, the brightness already exceeded the maximum measurable value of the light sensor.

→ Switch off luminaire using the pushbutton.

In the selected operating mode, daylight-controlled switching is switched off.

→ Select a suitable operating mode.

Presence detection is not functional

The luminaire was switched off by pushbutton less than 30 seconds ago.

→ Wait until the delay time expires.

The workplace is not fully within the detection area of the sensor.

 $\ensuremath{\Rightarrow}$ Move your hand in front of one of the sensors. If the LED in the sensor does not flash, realign the sensor to the workplace.

Presence detection is deactivated

→ Activate presence detection by briefly pressing the pushbutton.

Presence detection is switched off in the selected operating

→ Select a suitable operating mode.

No artificial light is necessary.

→ See "Function"

Presence detection cannot be deactivated

Double-click was locked.

→ Double-click re-released.

Presence detection is switched off in the selected operating

mode. → Select a suitable operating mode.

Appendix

Accessories

Designation/Description	Product number
LS/PD MULTI 3 Light and motion sensor	4050300802138
LS/PD MULTI 3 B Light and motion sensor, movable	4050300803081
LS/PD MULTI 3 FL Light and motion sensor, flat	4008321047342
LS/PD MULTI3 CI Light and motion sensor for ceiling installation	4008321916648
Y-CONNECTOR Branching element for the connection of additional sensors	4050300803135
Y-CONNECTOR Screw Branching element with screw terminal for connection of additional sensors and for connection of MULTleco systems with central presence detection	4008321916686
ECO CI KIT Cable strain relief for the independent installation of the MULTleco control unit (e.g. ceiling installation)	4008321392091
SENSOR KIT Adapter for the surface mounting of the LS/PD CI sensor	4008321916662

The CE requirements to EN 60928 are fulfilled. The EMC requirements to EN 61547 are fulfille d



Conformity with the relevant EU directives is confirmed by the CE symbol.